

glance over this catalogue will show the many good things such localities have given to our author. It is to be regretted that Dr. Schneck's time is so fully occupied that he cannot keep on hand a stock of duplicates for exchange. A striking feature of the flora of this region is the abundance of southern types. Up this low valley, running nearly north and south, many plants have found their way which one would scarcely expect to meet except in a more decidedly southern flora. These low rich bottoms have yielded such monsters in growth, especially among the climbers, that one is reminded of a South American jungle. Just hear Dr. Schneck's testimony on this subject. "Here I have found a grape vine (*Vitis Labrusca*), thirty-two inches in circumference, and near one hundred and fifty feet long, hanging from the massive branches of a lofty tree, appearing as if a monstrous cable suspended from the overhanging sky; Trumpet Vine (*Tecoma radicans*), thirty-eight and one-half inches in circumference, and climbing to the topmost branches of a tall tree, decorating it from root to top with a profusion of its foliage and orange-red trumpet shaped flowers; Cross Vine (*Bignonia capreolata*), ascending in a straight line the massive shaft of an oak, elm, or black walnut, to the height of seventy-five feet, its green, scarlet tinged foliage of winter persisting until late spring; Single-seed Cucumber (*Sicyos angulatus*), matting all bushes and vegetation, within ten feet of its root, into a thicket, or climbing up a neighboring tree to the distance of sixty-three feet; and in one instance, six climbing plants (*Smilax rotundifolia*, *Menispermum Canadense*, *Ampelopsis quinquefolia*, *Bignonia capreolata*, *Vitis cordifolia*, *Aristolochia tomentosa*), supporting themselves on the body and branches of one small American Elm." The author also gives us the names of several species which he thinks are disappearing with advancing civilization and will eventually have to be stricken from the flora of the Lower Wabash. The principal ones are *Cypripedium candidum* and *parviflorum*, *Alexis farinosa*, *Lilium Philadelphicum* and *superbum*, *Scilla Fraseri*, *Oenothera Rafinesquii*, and *Mertensia Virginica*. The author also states that as prairies were converted into fields the annual fires were soon stopped and as a consequence, in a few years a thick growth of young trees has sprung up, a view which, although it may be correct for a few localities, Prof. J. D. Whitney in recent numbers of the American Naturalist teaches us must be scouted as accounting for the general distribution of the prairie regions. Of course it would be tedious and useless to try to enumerate all the interesting plants listed in this catalogue and we can only refer those interested on the subject to the State publication in which this report occurs.—J. M. C.

SOME IOWA PLANTS.—At the suggestion of friends, in the interest of science, I send you the following names to be added to the Catalogue of Iowa plants. To simplify, we class them by the years in which they were discovered.

1876. To begin, let us note, in the interest of comparative botanical science and the geographical distribution of plants, that those marked with a star (\*) do not occur in Prof. Aughey's Catalogue of Nebraska plants, in the rarity and number of which we may feel a certain state pride. I have specimens of all named, and many to spare in most cases.

*Trifolium reflexum*\*, L., June 26th, old channel of Cedar River, at the bridge five miles above Cedar Rapids, perhaps floated down from Minnesota.

*Oenothera punctata*\*, L., 26th June, railroad grade, and dry, steep banks, near the above locality.

*Penstemon albidus*, Nutt, 26th June, near water at the base of the high railroad grade, one mile above Cedar Rapids. Truly fine and rare.

*Fraxinia Floridana*, Moquin, 13th September, street near the river, Cedar Rapids.\* Quite rare.

To which I may add an introduced plant found by Prof. McAfee on the College grounds, *Lotus corniculatus*\*, L. How introduced we can only imagine.

*Sonchus oleraceus*,\* L., 13th September, street, Cedar Rapids.

*Silene nocturna*,\* L., Ames, self-introduced, C. Lambs.

*Æthusa Cynapium*, L., streets and yards, Ames.

*Croton monanthogynum*, Mich., C. & N. W. R. R. grade, College farm, west end of the last bridge between Ames and College, August 1st. A rare plant, confined to said locality. I should not omit to say I found *Gratiola Virginica* only two miles north of Vinton.

*Lathyrus ochroleucus* and the very rare variety of *Purple Achillea*, five miles north of Cedar Rapids along the railroad track.\*

1875. *Cnicus benedictus*,\* L., Woodbine and Ames. (Int.)

*Astragalus Plattensis*, Nutt., Mo. Valley Junction and Crescent City, sand bluffs, Harrison and Pottawattamie counties, Iowa.

*Lespedeza violacea*, Pers., Keokuk Cemetery, 1866. This is indigenous and common there.

*Lathyrus palustris*, var. *myrtifolius*,\* Muhl., Woodbine, hazel brush.

*Eupatorium album*?\* Woodbine and Ames.

*Euphorbia cyathophora*, Jacq., Woodbine, new street, Cedar Rapids, and banks of Squaw creek, Ames.

*Chenopodium glaucum*, L., streets of Keokuk, 1866, and Dunlap, Harrison county.

*Populus angulata*, Ait., our White Cottonwood. Common throughout the state.

*Archangelica hirsuta*, Torr. and Gray, deep ravine, Mo. Valley Junction, Harrison county.

*Caragana arborescens*, Gray, Dea. Kingsbury's, Ames, and common in Ames, also at the College.

*Ammania latifolia*,\* L., near Woodbine, muddy brooks, in deep ravines; scarce seen in different localities in two successive years.

*Carex varia*, Muhl., everywhere; our earliest species.

*Andropogon Virginicus*, L., Woodbine to Ames.

*Vilfa aspera*, Beauv. Railroad, Ames to Woodbine.

*Panicum amarum*, Ell., prairies and railroad, Woodbine to Ames.

*Eatonia Pennsylvanica*, Gray., abounds from Crescent City to Ames; a beautiful grass.

*Glyceria fluitans*, R. Brown, 1876; ditches, Ames, at Stearn's and Bacon's, one mile north of Ames. Another beautiful, rare grass.

Besides these the writer may claim to have added to the *printed* catalogue of Iowa plants, the following, as they are all confined to the Mo. River slope, where he spent eight years in diligent research.

*Orybaphus albidus*,\* Sweet. Rare, on grade of Sioux City R. R., near Mo. Valley Junction.

*Orybaphus angustifolius*, Sweet. Rare and growing with the above; also near Denison, Crawford county.

*Chenopodium ambrosioides*,\* L. One locality alone between Logan and Magnolia, Harrison county, roadsides.

*Euphorbia hexagona*, Nutt., growing with or near *Euphorbia serpens*,\* H. B. K. Common *only* on sandy grade of the Sioux City Railroad, near Mo. Valley Junction.\* I only thought I saw *E. serpens* ten miles up Boyer Valley.

*Aplorappus spinulosus*, DC. (Small form, Gray). Common on the steep sand bluff at Mo. Valley Junction.

*Rosa lucida*, Ehrhart, with a var., very glandular, hairy all over capsule and calyx, which ought to be called *R. lucida*, var. *glandulosa*.

*Traloscantia rosea*, Vent., abounds along C. & N. W. R. R. from Ames to Woodbine; while *T. Virginica* abounds in its glory, rank and gorgeous, in Cedar River Valley,

but nowhere west of that. The latter is three times the height of the former, and constantly *deep blue*.

I was surprised to see the difference in grasses here from those of the rich, alluvial valleys of the west of the State; *Agrostis scabra*, Willd., *Aristida gracilis*, Ell., *Festuca tenella*, Willd., and *Sporobolus heterolepis*, Gray, all indicative of a thin soil and just suited to our decomposed Iowa-granite sub-soil. Hence I fear, botanical science with the geographical distribution of plants, most exactly confirms the exhibit of Iowa soils at the Centennial—making that of Story county the thinnest of all; a fact confirmed by abounding *Juncus tenuis* and *Artemisia Canadensis*, both unknown farther west. I think I make out in Story county these four *Salices* which do not occur in the west of the State, viz.: *Salix humilis*, *S. pectolaris*, *S. sericea* and *S. eriocephala*. The willows are a notoriously difficult family, but, after careful study and search during the season, I am fully satisfied there are no "Red" or "Diamond Willows" in Story county, nor anywhere east of the "Divide" at the head of Boyer Valley. I am equally convinced that they are NEW SPECIES, and not at all *Salix cordata* with a var. *myrtifolia*. With all their greater need of timber for posts, the common-place pioneers of Mo. River Valley *could not* have discovered in 20 years what the "live Yankee" had not discovered in 250 years in the east, *that these willows were as durable as Red Cedar* for fence posts! How long shall we wait for names to be assigned by the Masters? Or, shall we who alone have the tree, alive, or in lumber, to study with all due care, call them *Salix rhomboidea* and *Salix rhomboid-indentata*? For both species are noted for their diamond-shaped depressions in root and trunk, from which our most unique canes are made.—ROBERT BURGESS, Ames, Iowa, Nov., 1876.

**Obituary.**—We regret to announce to our readers the death of Professor Herbert E. Copeland, teacher of Natural Sciences in the Indianapolis High School. The sad event occurred on Tuesday, Dec. 12th, and was caused by his devotion to his favorite studies. About 3 weeks before his death while he was fishing in one of the streams near Indianapolis to secure specimens for his scientific work, he fell into the water, and by this means contracted a severe cold. This was followed by an attack of brain fever, which later changed into the typhoid form, terminating in death. He leaves a wife and two small children. Professor Copeland was an enthusiastic student of the Sciences, and his successes in the class room and with the pen, gave promise of a brilliant future. In him the GAZETTE loses one of its firmest friends and most constant contributors. At the time of his death he had in preparation several articles which would have appeared in subsequent numbers.

**RECENT PUBLICATIONS.**—*The American Journal of Science and Arts*, November.—Dr. Gray reviews the Proceedings of the American Association for the Advancement of Science, Botanical Articles. He remarks that these are few and not of high importance.

*The American Naturalist*, November.—Dr. Geo. H. Perkins contributes an interesting article on the "Hygiene of House Plants," in which he assures the lovers of flowers that house plants are physically, intellectually and morally healthful. He states that they are injurious only as they increase the carbonic acid in the air, and as they give out injurious perfumes. He shows that both these effects are counterbalanced and that house plants are positively useful, "as they pour aqueous vapor into dry air, as they demand plenty of light and air, and on this account many a room, otherwise dark and unwholesome, is well lighted and aired." An interesting series of observations are given upon the growth of the flower-stalk of the Hyacinth, by A. W. Bennett, which go to prove that the "greatest energy of growth is displayed by the apical portion of the peduncle or that immediately beneath the flower-bud, the energy apparently decreasing regularly towards the base of the flower-stalk."